IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Cancelled):

Claim 2 (Cancelled):

Claim 3 (Currently Amended): An integrated circuit comprising:

a plurality of thermal sensors each placed in one of a plurality of different locations across the integrated circuit;

an averaging mechanism to calculate an average temperature from the plurality of sensors; and

a register associated with the averaging mechanism to store a threshold temperature value and interrupt logic associated with the averaging mechanism to generate an interrupt if the calculated average temperature exceeds the threshold temperature.

Claim 4 (Original): The integrated circuit of Claim 3 further comprising clock adjustment logic to decrease a clock frequency of the integrated circuit in response to an interrupt from the interrupt logic indicating that the threshold temperature has been exceeded.

Claim 5 (Original): The integrated circuit of claim 3 wherein the register is programmable by the integrated circuit.

Claim 6 (Original): The integrated circuit of claim 5 further comprising threshold adjustment logic to program the register to a different threshold temperature in response to an interrupt from the interrupt logic indicating that the threshold temperature has been exceeded.

Claim 7 (Original): The integrated circuit of claim 6 wherein the threshold adjustment logic is further to program the register to a second different threshold temperature in response to an interrupt from the interrupt logic indicating that the first different threshold temperature has been exceeded.

Claim 8 (Previously Presented): The integrated circuit of Claim 3 further comprising clock adjustment logic to control the temperature of the integrated circuit by increasing and decreasing an integrated circuit clock frequency in response to the calculated average temperature.

Claim 9 (Previously Presented): The integrated circuit of Claim 3 further comprising halt logic to halt operation of the integrated circuit in response to the calculated average temperature.

Claim 10 (Previously Presented): An integrated circuit comprising:

a plurality of thermal sensors each placed in one of a plurality of different locations across the integrated circuit;

an averaging mechanism to calculate an average temperature from the plurality of sensors; and

an interrupt handler to display information regarding the calculated average temperature to a user of the integrated circuit.

Claim 11 (Previously Presented): The integrated circuit of Claim 10 further comprising interrupt logic to generate a first interrupt if the calculated average temperature exceeds a first threshold and a second interrupt if the calculated average temperature exceeds a second threshold.

Claim 12 (Cancelled):

Claim 13 (Currently Amended): The method of Claim 14 further comprising comparing each of the plurality of sensed temperatures to a threshold and generating an interrupt in response thereto.

Claim 14 (Currently Amended): A method comprising:

sensing temperature at a plurality of different locations across an integrated circuit;

calculating an average temperature from the plurality of ~~difference~~ different sensed temperatures; and

storing a threshold temperature value in a register and generating an interrupt if the calculated average temperature exceeds the stored threshold temperature.

Claim 15 (Original): The method of Claim 14 further comprising decreasing a clock frequency of the integrated circuit in response to an interrupt indicating that the threshold temperature has been exceeded.

Claim 16 (Original): The method of Claim 14 further comprising programming the register to a different threshold temperature in response to an interrupt indicating that the threshold temperature has been exceeded.

Claim 17 (Original): The method of Claim 16 further comprising programming the register to a second different threshold temperature in response to an interrupt indicating that the first different threshold temperature has been exceeded.

Claim 18 (Previously Presented): The method of Claim 14 further comprising controlling the temperature of the integrated circuit by increasing and decreasing an integrated circuit clock frequency in response to the calculated average temperature.

Claim 19 (Previously Presented): The method of Claim 14 further comprising halting operation of the integrated circuit in response to the calculated average temperature.

Claim 20 (Currently Amended): A method comprising:

sensing temperature at a plurality of different locations across an integrated circuit;

calculating an average temperature from the plurality of ~~difference~~ different sensed temperatures; and

displaying information regarding the calculated average temperature to a user of the integrated circuit.

Claim 21 (Previously Presented): The method of Claim 14 further comprising generating a first interrupt if the calculated average temperature exceeds a first threshold and a second interrupt if the calculated average temperature exceeds a second threshold.